

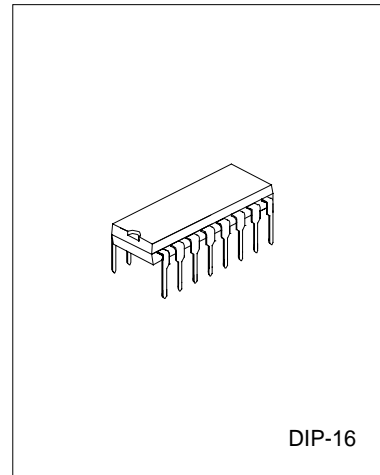
STEREO AUDIO AMPLIFIER

DESCRIPTION

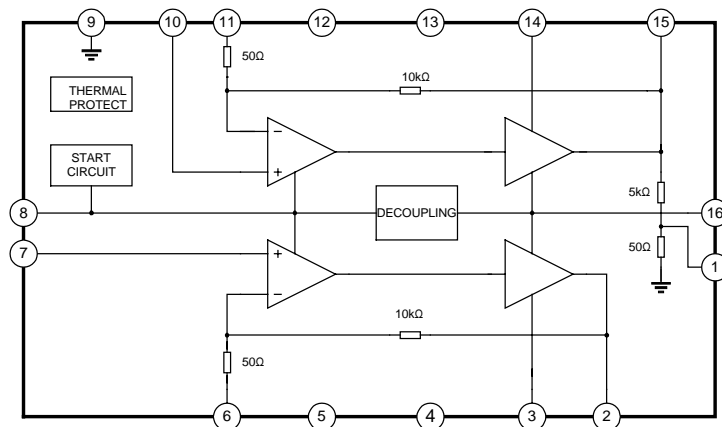
The UTC2025 is a monolithic integrated audio amplifier in a 16-pin plastic dual in line package. It is designed for portable cassette players and radios.

FEATURES

- *Working Voltage down to 3V
- *Few External components
- *High Channel isolation
- *Voltage gain up to 45dB(Adjustable with external resistor)
- *Soft clipping
- *Internal Thermal protection



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

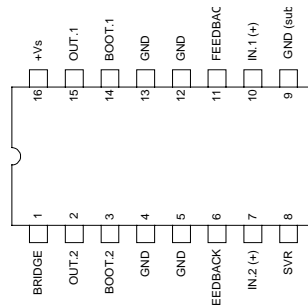
Characteristic	Symbol	Value	Unit
Supply Voltage	Vs	15	V
Output Peak Current	Io	1.5	A
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-40~+150	°C

ELECTRICAL CHARACTERISTICS(T_{amb}=25°C, V_{CC}=9V, Stereo, Unless otherwise specified)

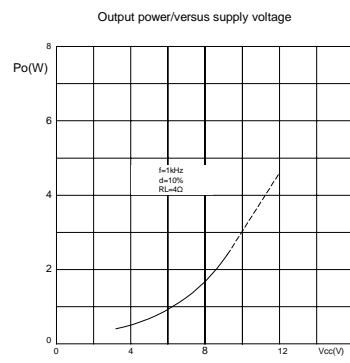
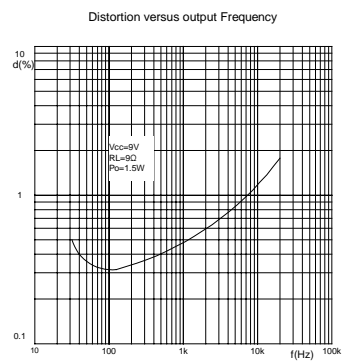
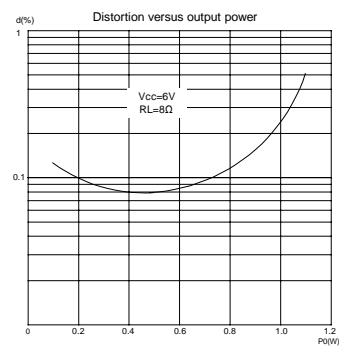
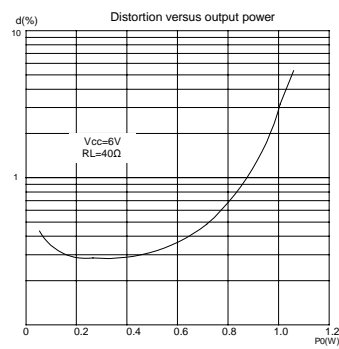
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Supply Voltage	V _S		3	—	12	V
Quiescent Current	I _Q		—	40	50	mA
Quiescent output voltage	V _O		—	4.5	—	V
Voltage gain	A _V	Stereo	43	45	47	dB
		Bridge	49	51	53	
Voltage gain difference	ΔA _V		—	—	±1	dB
Input impedance	R _i		—	30	—	kΩ
Output Power	P _O	f=1kHz; d=10% Stereo per channel V _{CC} =9V; R _L =4Ω R _L =8Ω	1.7 —	2.3 1.3	— —	W
		V _{CC} =6V; R _L =4Ω R _L =8Ω	0.7 —	1 0.6	— —	
		V _{CC} =3V; R _L =4Ω	—	0.1	—	
		Bridge V _{CC} =9V; R _L =8Ω	—	4.7	—	
		V _{CC} =6V; R _L =4Ω	—	2.8	—	
Distortion	d	V _{CC} =9V; R _L =4Ω f=1kHz; P _O =250mW Stereo	—	0.3	1.5	%
		Bridge	—	0.5	—	
Supply voltage Rejection	SVR	R _G =0; A _V =45dB V _{ripple} =150mVRMS F _{ripple} =100Hz	40	46	—	dB
Input noise Voltage	V _n	A _V =200 Bandwidth: 20Hz to 20kHz R _G =0	—	1.5	3	μV
		R _G =10kΩ	—	3	6	
Cross-Talk	C.T.	R _G =10kΩ; f=1kHz; R _L =4Ω P _O =1W	40	55	—	dB

THERMAL RESISTANCER_{th(j-c)}: Junction to case thermal resistance 15°C /WR_{th(j-a)}: Junction to ambient thermal resistance 60°C /w

PIN CONNECTION



TYPICAL PERFORMANCE CHARACTERISTICS



APPLICATION CIRCUITS

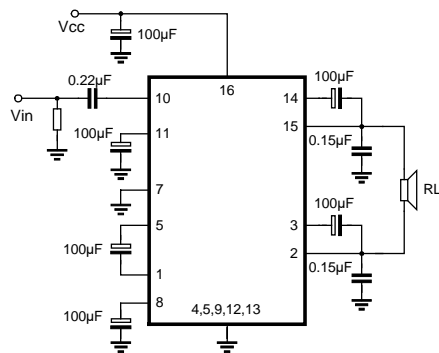


Fig. 5 Bridge Application

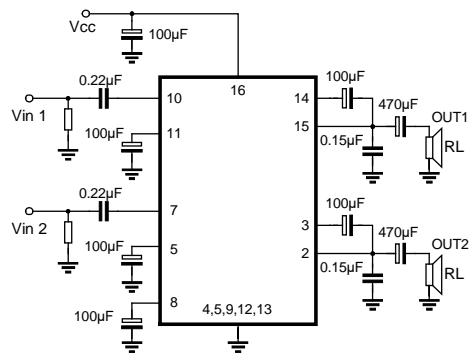


Fig. 6 Stereo Application

SCHEMATIC DIAGRAM

